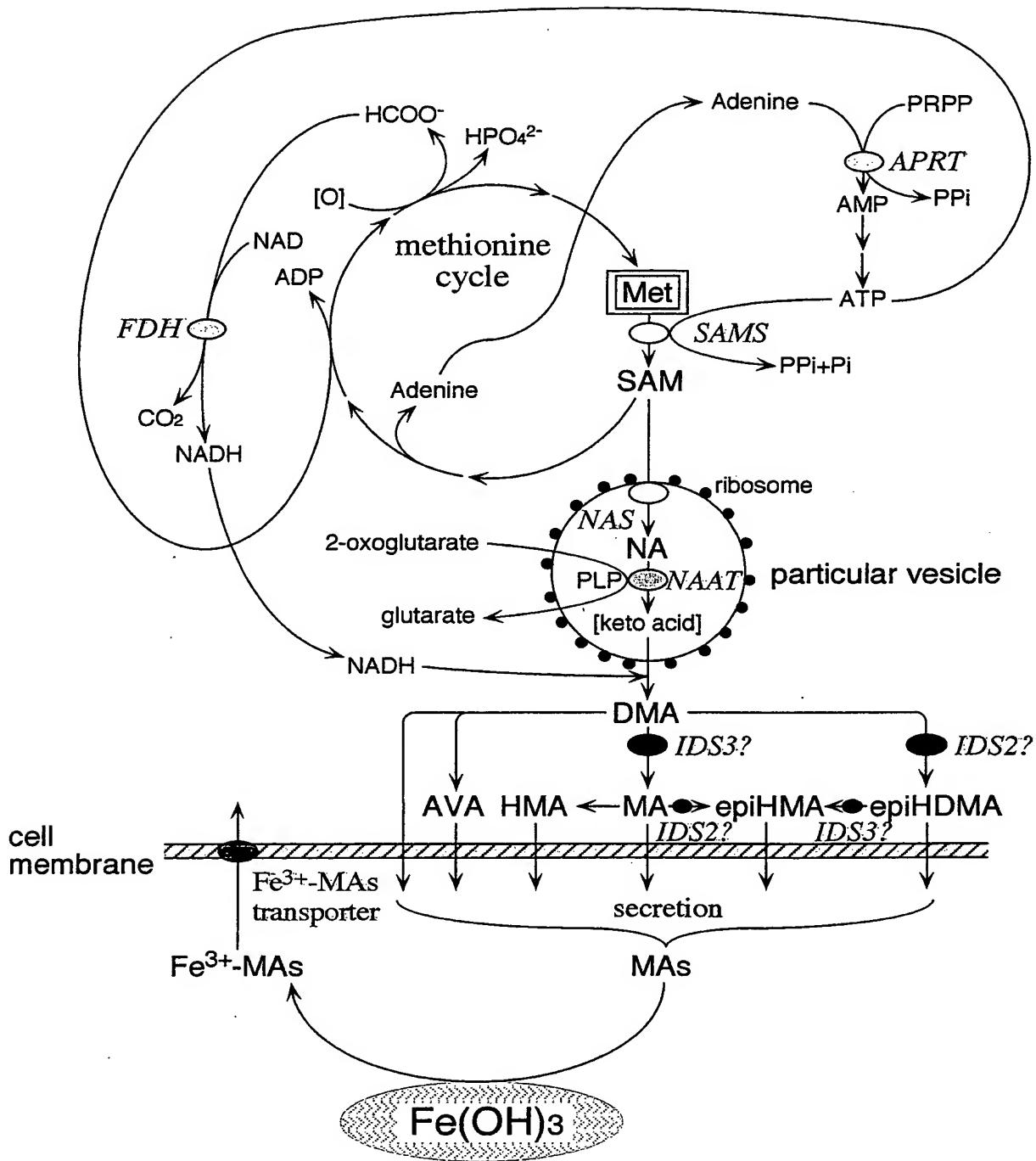


FIG. 1



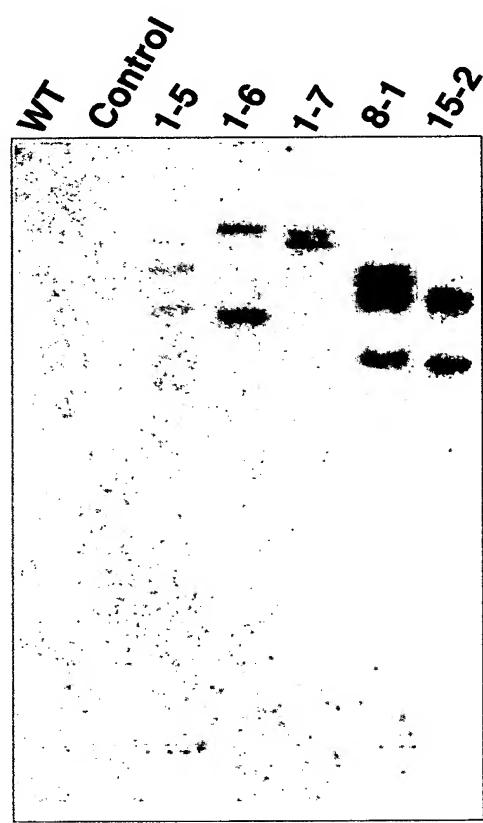
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FIG. 2



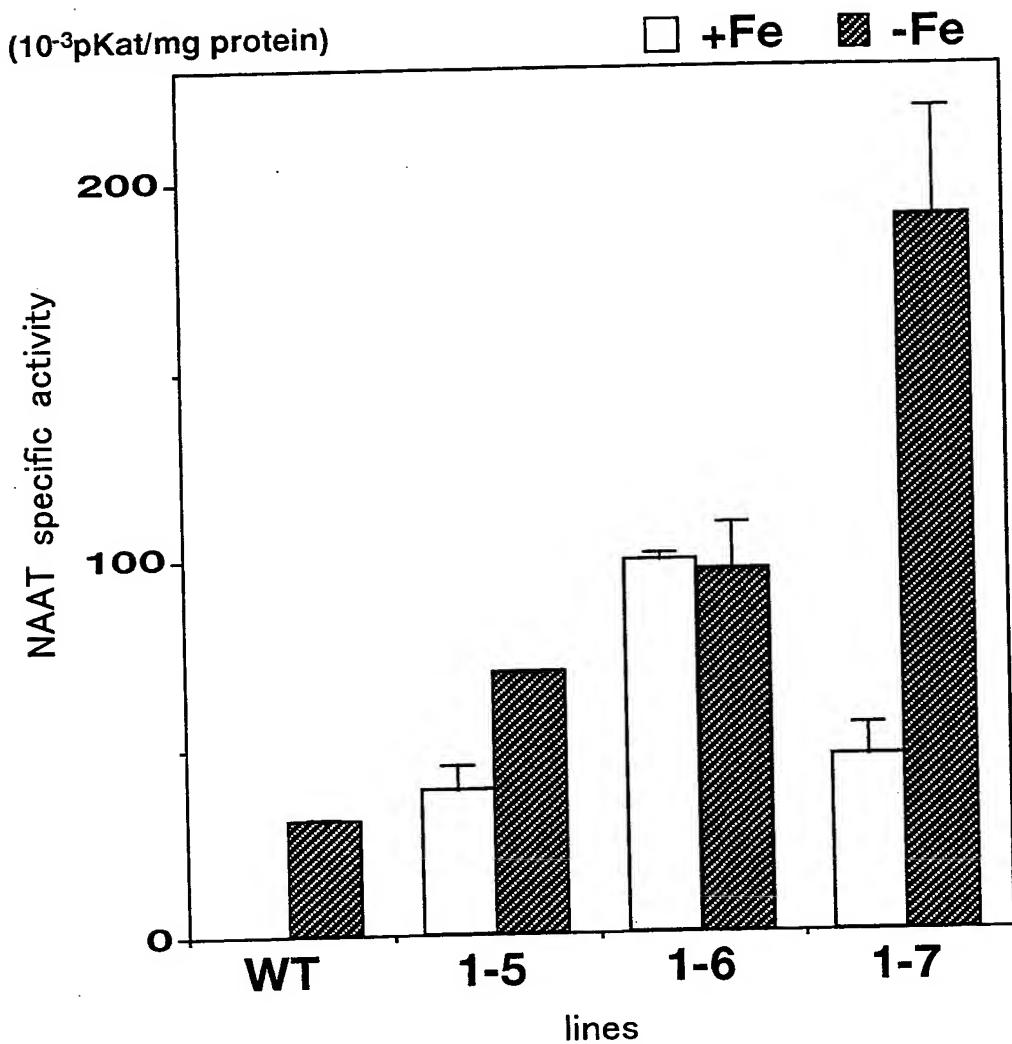
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**FIG. 3**



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F I G., 4



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FIG. 5

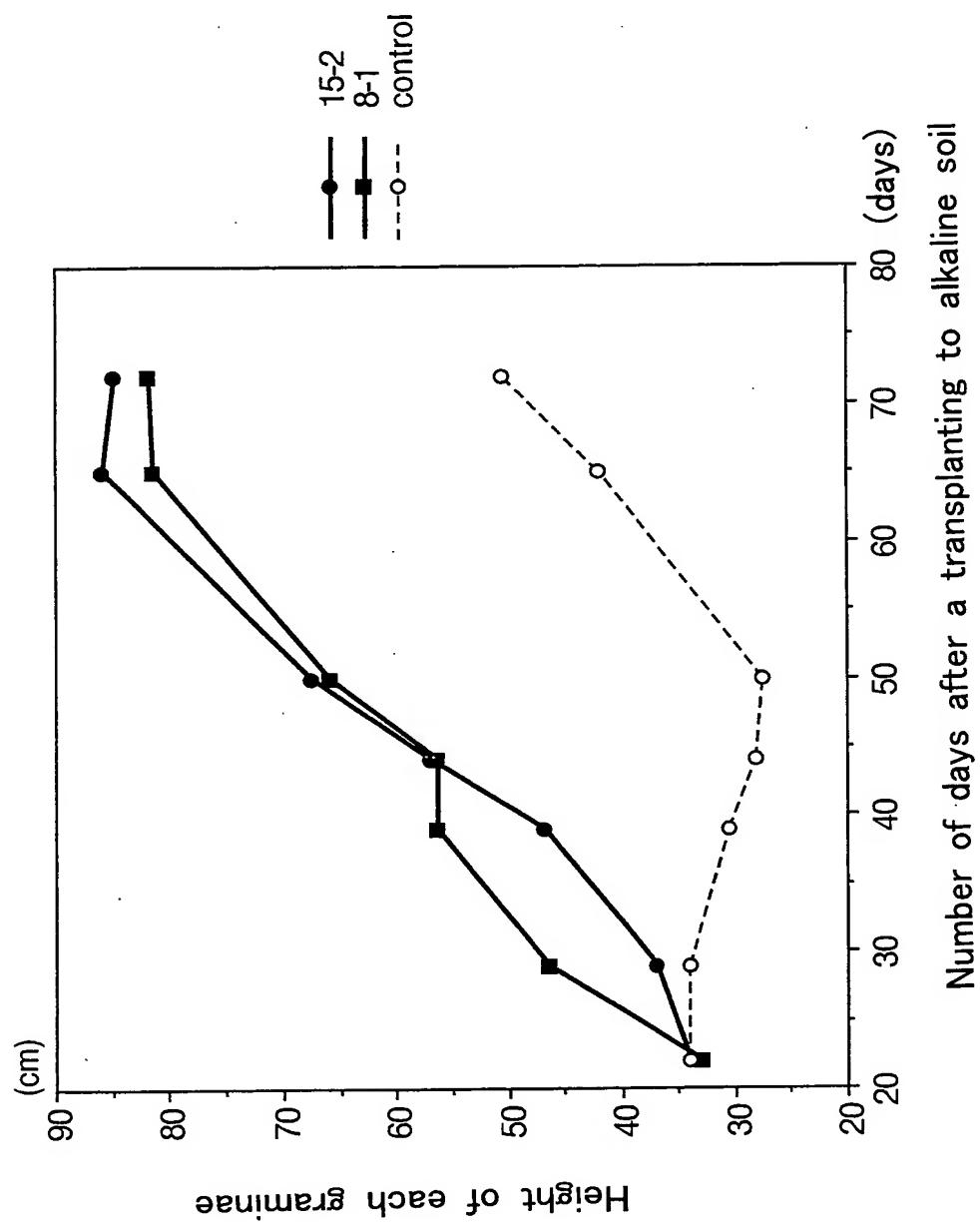


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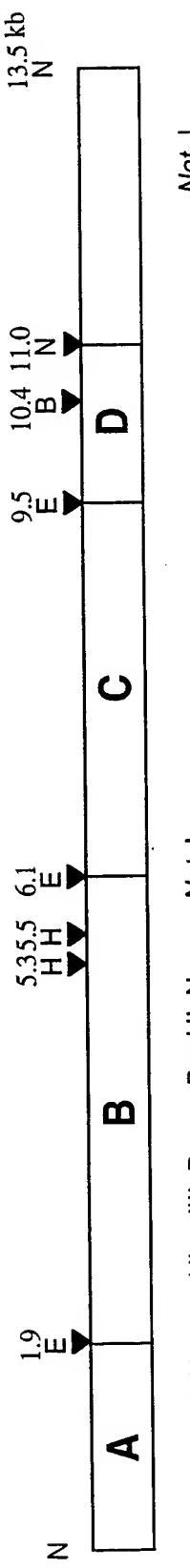
FIG. 6



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CONTRACTING CONTRACT

FIG. 7

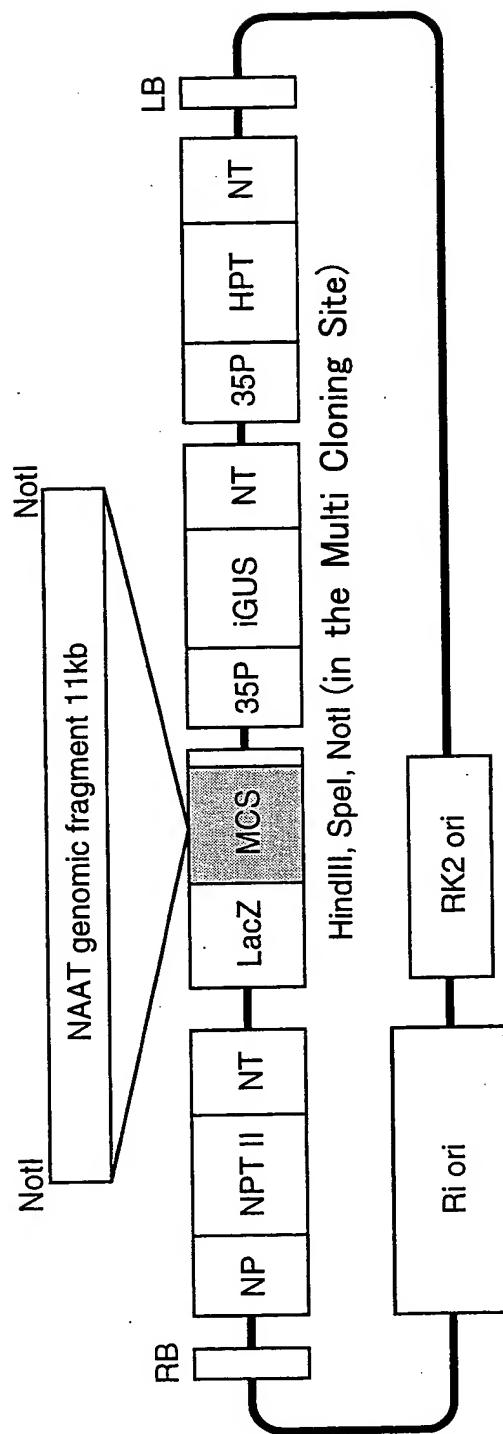


E: Eco RI, H: Hinf I, B: BamHI, N: Not I.

The Not I site on both sides is the Not I located at the arm of  $\lambda$ FIX II

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FIG. 8



## F I G. 9

CTCGATCCCATTGCAATGGTATGATTAGCTATCAAACGAAAGAAAGAGATGGCATGTGCC  
 CTGTGTGTCATCCCTCACTGGCTGGGAATGGCGATACCGAGTTAGTAGAGTGT  
 TTAGCATGATGTCGCGGCACTGCCAAGAAAACGCGTGCAGCGGACTGCAGGAGAGTT  
 GAGCGATGCATGCTTGTGATGAGCGGAGCTGAGTGGGTGTCACTAACTGAACCCAATCA  
 GCATTGGGTGAGTCGAGTCGAGAACATCATGCTCCTGCGTCCGATCCGTTATCTT  
 TTCTCCAAATTATTAAAGAGGGATAGATGATGGTGTGCTGGGTGGTAGAGTACGTGC  
 ATAGAACCAAAGCGAGGCGCCAAAATATGCCGGGATAATGGTGGCAGGCCGCAACGGC  
 CACGCCCGTCAGCTGGCAGCGCGTGCCAGAGCGTGCCAGAGCGTGCGCGTGC  
 TCTTGCTGCCGGCCCGGTTCGTGTGCGGTAGAGCAACGCTATATAGGACCGTCAATC  
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 GTAGTCTAGTAGTACTCCTCCTCCTCCTACCGTTCCATGGCCACCGCAA  
 ACGCCAGAGCGACGGAGTCGCCCGAACGCCCTGCCGTGCCAGCGCAACGGCAA  
 GAGCAACGCCATGCCGTGGCTGCCCGTGAAACGGCAAGAGCAACGCCATGGCGT  
 TGCCGACCGAACGCCAAGAGCAACGCCATGGCGTGGCTGCCGACCGCAACGGCAA  
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 CAACGCCACCGCGAGAGCAACGCCATGCTGAGGCCACGGCGACCGCAACGGCGAGAGCAA  
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## FIG. 10

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 M A T V NAAT-B

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 R Q S D G V A A N G L A V A A A A A N G K

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 S N G H G V A A A V N G K S N G H G V D

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 A D A N G K S N G H G V A A A D A N G K S

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 N G H A E A T A N G H G E A T A N G K T

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 N G H R E S N G H A E A A D A N G E S N

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 E H A E D S A A N G E S N G H A A A A A

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 E E E E A V E W N F A G A K D G V L A A

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 T G A N M S I R A I R Y K I S A S V Q E

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 K G P R P V L P L A H G D P S V F P A F

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 R T A V E A E D A V A A A L R T G Q F N

CTGCTACCCGCCGGCGTCGGCTCCCCGCCACGAAGgtacaacaacaacaacacaa  
 C Y P A G V G L P A A R S

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A V A E H L

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A A L P Q I L E N T K E D F F K A I I G



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CCACACTGCTAGTACTCCTCGTTCCCTCGTGGCAATGGTACACCAGAGCAACGGCCA  
M V H Q S N G H NAAT-A

CGGCGAGGCCGCGCCGCGCCGCAACGGCAAGAGCAACGGGCACGCCGCCGCCGCAA 6600  
G E A A A A A A N G K S N G H A A A A N

CGGCAAGAGCAACGGGCACGCCGCCGGCGGTGGAGTGAATTCGCCCGGGCAA  
G K S N G H A A A A V E W N F A R G K

GGACGGCATCTGGCAGCACGGGGCGAAGAACAGCATCCGGCGATACGGTACAAGAT  
D G I L A T T G A K N S I R A I R Y K I

CAGCGCGAGCGTGGAGGAGAGCAGGGCCGAGGGCCGTGCTGCCGCTGGCCACGGTGACCC  
S A S V E E S G P R P V L P L A H G D P

GCGCACCGGCCAGTTCAACTGCTACGCCGCCGGNNNTGGCCTCCCCGCCGCACGAAGgt  
R T G O F N C Y A A G V G L P A A R S

```

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acaaaacagCGCCGTAGCAGAGCACCTGTCACAGGGCGTGCCTACAAGCTATCGGCCGAC
          A   V   A   E   H   L   S   Q   G   V   P   Y   K   L   S   A   D

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D V F L T A G G T Q A I E V I I P V L A  
  
CAGACTGCCGGCGCCAACATACTGCTTCCCCGGCCAGGCTATCAAATTACGAGGCCGA 7200  
Q T A G A N I L L P R P G Y P N Y E A R  
  
GCGGCATTCAACAAGCTGGAGGTCCGGCACTTCGACCTCATCCCCGACAAGGGTGGGAG  
A A F N K L E V R H F D L I P D K G W E  
  
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I D I D S L E S I A D K N T T A M V I I  
  
AACCCAAACAATCCGTGCGGCAGCGTTACTCCTACGACCATCTGGCAAAGgtttgcatt  
N P N N P C G S V Y S Y D H L A K  
  
ccatgcatttcgtgtgttatcagGTCGGAGGTGGCAAGGAAGC  
ttgcttaatcgatgttatcagGTCGGAGGTGGCAAGGAAGC  
V A E V A R K  
  
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L G I L V I A D E V Y G K L V L G S A P  
  
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F I P M G V F G H I A P V L S I G S L S  
  
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K S W I V P G W R L G W V A V Y D P T K  
  
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I L E K T K  
  
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I S T S I T  
  
GAATTACCTTAATGTCTAACGGACCCAGCAACCTCGTCAGgttagtctttgggtctt  
N Y L N V S T D P A T F V Q  
gccctattttgtcatgtccctgttgtcatgtcaaattgaccggcttcaagtttagtata  
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E A L P K I L E N T K A D F F K R I I  
  
TGGTCTACTAAAGGAATCATCAGAGATATGTTATAGGGAAATAAGGAAAACAAATATAT 8400  
G L L K E S S E I C Y R E I K E N K Y I  
  
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T C P H K P E G S M F V M

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V K L N L H L L

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E E I H D D I N F C C K L A K E E S V I

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L C P

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G S V

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L G M E N W V R I T F A C V P S S L Q D

TGGACTCGAAAGGGTCAAATCATTCTGTCAAAGGAACAAGAAGAAGAATTCTATAAATGG  
G L E R V K S F C Q R N K K K N S I N G

TTGTTAGTTGTACACACCCCTAGTTGTACATCTGACTGAAGCTGAAATCATTTCTAGTT 9600  
C \*  
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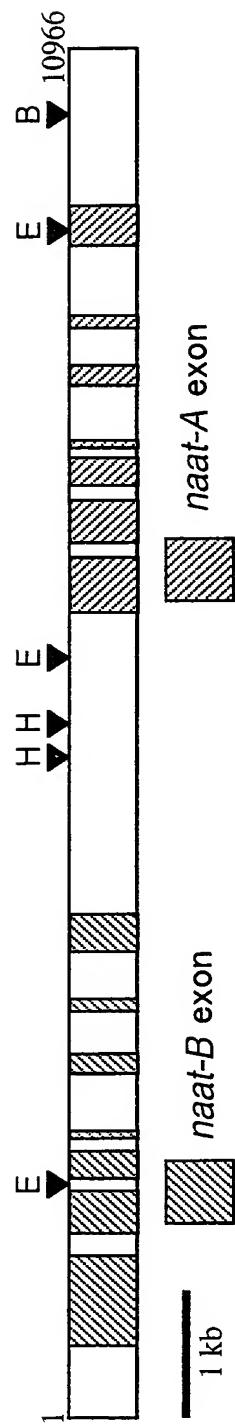
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tatctgtatcagacgacaaatccatgtccgtcactcgcttatcttggtcattgacatac  
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400019783 019783

FIG. 11

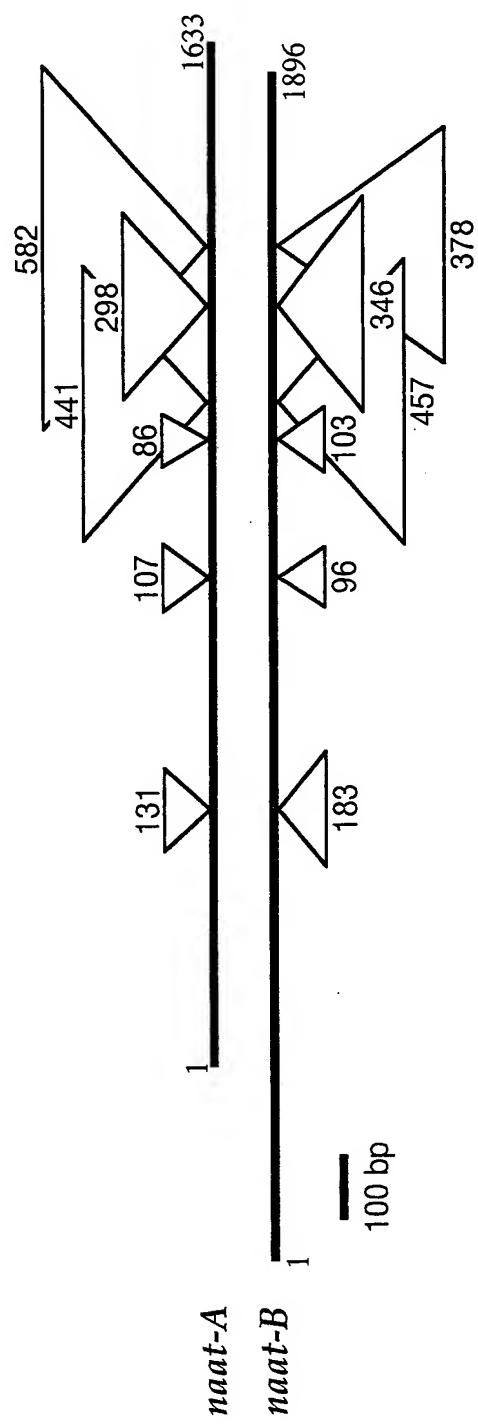


E: *EcoRI*, H: *HindIII*, B: *BamHI*.

A schematic view of the obtained genome fragment

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FIG. 12



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F I G . 1 3

MVHQSNHGGEAAAAANGKSNGHAAAANGKSNGHAAAAAVEWNFARGKDGLATTGAKNS  
IRAIRYKISASVEESGPRPVLPLAHGDPGVPAFRATAEADAVAAALRTGQFN CYAAGV  
GLPAARSAVAEHLSQGPYKLSADDVFLTAGGTQAI EVIIPVLAQTAGANILLPRPGYPN  
YEARAAFNKLEVRHFDLIPDKGWEIDIDSLESIADKNTTAMVIINPNNPCGSVSYDH LA  
KVAEVARKLGILVIADEVYGKLVLGSAPFIPMGVFGHIAPVLSIGSLSKSWIVPGWRLGW  
VAVYDPTKILETKIISTSITNYLNSTDPATFVQEALPKILENTKADFFKRIIGLLKESS  
EICYREIKENKYITCPHKPEGSMFVMVKLNHLLEEIHDDINFCCKLAKEESVILCPGSV  
LGMENWVRITFACVPSSLQDGLERVKSFCQRNKKNSINGC \*

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F I G . 1 4

ATVRQSDGVAANGLAVAAAANGKSNGHGVAAVNGKSNGHVDADANGKSNGHGVADAN  
GKSNGHAEATANGHEATANGKTNGHRESNGHAEAADANGESNEHAEDSAANGESNGHAA  
AAAEEEAVEWNFAGAKDGVLAATGANMSIRAIRYKISASVQEKGPRPVLPLAHGDPGV  
PAFRATAEADAVAAALRTGQFN CYPAGVGLPAARSAVAEHL SQGPYMLSADDVFLTAG  
GTQAI EVIIPVLAQTAGANILLPRPGYPN YEARAAFNRL E VRHFDLIPDKGWEIDIDSLE  
SIADKNTTAMVIINPNNPCGSVSYDHLSKVAEVAKRLGILVIADEVYGKLVLGSAPFIP  
MGVFGHITPVLSIGSLSKSWIVPGWRLGWVAVYDPRKILQETKIISTSITNYLNSTD PAT  
FIQAALPQILENTKEDFFKAIIGLLKESSEICYKQIKENKYITCPHKPEGSMFVMVKLN  
HLLEEIDDDIDFCCKLAKEESVILCPGSVLGMANWVRITFACVPSSLQDGGLGRIKSFCQR  
NKKRNSSDDC \*

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FIG. 15 A



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FIG. 15 B



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FIG. 16

